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(54) Fiber opening, mixing and flow regulating apparatus and method.

(57) An improved fiber opening, mixing, and flow regulating apparatus and method are disclosed. The apparatus includes a textile fiber feeder (F) which opens, mixes, and regulates the flow of fibers from a ball (B) inside the feeder. A primary opening element is provided by a stationary spiked apron feed (I), and a secondary fiber opening element provided by a movable spiked apron (S). A gap (G) is defined between the opposing pins of the primary and secondary opening elements (I,S) which regulates the flow of fibers delivered by the feeder. By moving secondary opening element (S) in either linear or rotational motions, gap (G) may be modulated and the flow of fibers regulated. A controller (E) may be provided to receive a speed signal (54) representing the operational speed of a textile process downstream of fiber feeder (F) and a fiber quantity signal (16) may also be processed by controller (E) as well as various and other signals. A drive signal (18) controls the movement of secondary opening element (S) and the position may be fed back to the controller (E) by signal (52).

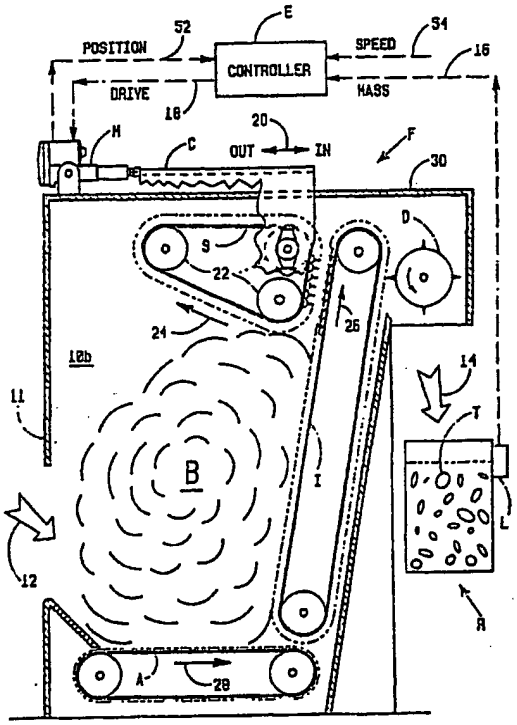

FIG. 1

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EUROPEAN SEARCH REPORT

Application Number

EP 90 30 4040

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y	TEXTILBETRIEB, vol. 101, no. 4, April 1983, pages 15,23, Würzburg, DE; "Perfekte Flockeneinspeisung bei modernen Mischanlagen" * Pages 15,23 *	1,3,6-9, 11-13, 15-19,21	D 01 G 7/08 D 01 G 13/00
Y	CH-A-4 151 13 (HAROLD CATLING.) * Page 2, line 113 - page 3, line 11; figure 2 *	1,3,6-9, 11-13, 15-19,21	
A	US-A-3 744 091 (D.E. WOOD) * Column 2, lines 33-66; column 4, lines 24-36; figure 1 *	1,6,7	
A	GB-A-1 177 724 (TEFAMA TEXTILMASCHINENFABRIK, MEISSNER MORGNER & CO.) * Whole document *	1,6,7	
D,A	US-A-3 889 319 (J.H. ROBERSON) * Column 2, lines 14-42; figure 2 *	1,6,7,9,16	
D,A	US-A-3 326 609 (C.R. AUTEN et al.) * Column 3, lignes 59-66; figuure 2 *	1,6,7,9,16	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A	US-A-3 487 509 (E.H. BOND et al.) * Figure 1 *	1,6,7,9,16	D 01 G
A	ZEITSCHRIFT FÜR DIE GESAMTE TEXTILINDUSTRIE, vol. 66, November 1964, pages 893-900; E: KIRSCHNER: "Über Fortschritte auf dem Gebiet der automatischen Flocken-mischung in der Dreizylinderspinnerei" * Page 895 *		

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
The Hague	29 April 91	KELLNER F.M.

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
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